

REMARKS

Claims 1-20 are currently pending in the application. New claims 16-20 have been added. Support for new claims 16, 18 and 20 can be found throughout the specification, for example, on page 12, line 21 to page 13, line 3. Support for new claims 17 and 19 can be found throughout the specification, for example on page 11, lines 11- 17. Applicants respectfully assert that no new matter has been added and request reconsideration of the claims currently pending in the application.

I. Rejection based on 35 U.S.C. §102(e)

In paragraph 2 on page 2 of the Office Action, claims 1, 2, and 5 are rejected under 35 U.S.C. §102 (e) as being anticipated by Nomura. (U.S. Patent No 6,203,850).

The Examiner asserts that Nomura teaches porous polymeric materials that have undergone surface treatment involving exposure to a glow discharge gas plasma containing a gas mixture of at least one saturated hydrocarbon and a source of oxygen. Col. 4, lines 33-38, and col. 5, lines 52-54. The Examiner further notes that the porous surfaces to be treated include porous materials, such as nylons, in the form of sheets, films, fibers, etc., and these materials have stabilized surface hydrophilicity and reduced adsorption characteristics. Col. 5, lines 8-20. The examiner admits that the reference does not specifically teach wicking materials, but asserts that it teaches that porous materials have adsorption capacities that would be suitable as wicking materials, and will inherently have the properties claimed by the present invention. Col. 5, lines 31-37.

Applicants respectfully traverse the rejections.

Applicants agree that Nomura broadly discloses and teaches surface treatment involving exposure to a glow discharge gas plasma containing a gas mixture of at least one saturated hydrocarbon and a source of oxygen to modify surface characteristics. See col. 3, lines 15-35. Though such treated materials can have a wide range of properties, Nomura focuses on providing porous materials with a combination of surface hardening and hydrophilicity for used as filtration membranes, such as ultrafiltration and microfiltration membranes. See col. 3, lines 16-19, and lines 27-30. Such treated materials are highly effective in processes involving transmembrane pressure differentials, for example, in the treatment of protein-containing fluids. See col. 3, lines 26-30. Nomura also teaches the use of gas plasma predominately rich in saturated alkanes, or acetylene, and optionally with additional gases such as oxygen or a source of oxygen. See col. 5, lines 49-54 and Tables 11-4, col. 8-10. Thus, though Nomura has broad disclosures, and filtration and wicking both involve the use of porous materials, Nomura does not disclose how to arrive at, not only a wick, but a wick that exhibits a horizontal wicking rate of at least about 1.0 millimeter per second in contact with physiological fluid, the subject matter of claim 1. In wicking, the physiological fluid is being transported. The filtration membranes taught by Nomura do not inherently have the properties of a wick that exhibits a horizontal wicking rate of at least about 1.0 millimeter per second when in contact with physiological fluid because filtration involves not only transportation, but also separation of the filtrate into components while it is being transported.

To anticipate a claim, the reference must teach every element of a claim. "A claim is anticipated only if each and every element as set forth in the claim is found,

either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102. Applicants respectfully submit that Nomura does not teach every element of claim 1, and therefore fails to anticipate claim 1.

Dependent claims 2 and 5, which are dependent from independent claim 1, were also rejected under 35 U.S.C. §102(e) as being unpatentable over Nomura. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims for the cited references. Therefore, dependent claims 2 and 5 are also in condition for allowance.

Applicants respectfully request withdrawal of the rejection of claims 1, 2, and 5 under 35 U.S.C. §102 (e) as being anticipated by Nomura.

II. Rejection under 35 U.S.C. § 103(a)

In paragraph 4 on page 3 of the Office Action, claims 3, 4, and 6-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nomura in view of Carroll, et al. (U.S. Patent No. 6,040,195).

The Examiner admits that Nomura fails to teach a diagnostic device for analyzing an analyte in a physiological fluid wherein the device contains a surface treated wicking material, and cited Carroll, et al., which the Examiner asserts to teach a diagnostic device for analyzing blood, to supply the deficiency. The Examiner further asserts that the device of Carroll, et al. contains a reagent containing layer (40) and a separation layer made of woven cotton/polyester fabric (30), sandwiched together within a holder made from upper and lower supports (12 and 13). The Examiner also notes that the fabric is surfaced treated to minimize adsorption of plasma and allow more plasma to reach the reagent layer. Col.6, lines 32-57. Finally, the Examiner notes that Carroll, et al. seek to minimize adsorption of blood samples to lower the amount of sample needed for testing, and that Nomura teaches that by using discharge gas plasma surface treatments, the surfaces of porous materials exhibit reduced protein adsorption and fouling tendencies. Thus, the Examiner asserts that it would be obvious to one of ordinary skill in the art to modify the device of Carroll, et al. by surface treating the separating layer (30) with glow discharge plasma as disclosed in Nomura to lower absorption and reduce fouling.

Applicants respectfully traverse the rejections.

Applicants have already discussed Nomura in relationship to claim 1 above. Nomura does not teach, nor do the filtration membranes taught in Nomura inherently have the properties of a wick that exhibits a horizontal wicking rate of at least about 1.0 millimeter per second in contact with physiological fluid, the subject matter of claim 1. This deficiency is not supplied by Carroll, et al., as Carroll, et al. also teach separation and filtration, but not wicking. See col. 6, lines 33-38. Carroll, et al. teach a separation

layer (30), pretreated with a blood cell separating agent prior to assembly to enhance filtration, and to remove approximately 80 percent of red blood cells from the blood sample. See col. 6, lines 33-37, and lines 58-60. The blood cell separating agents imbibed in the separating layer (30) may be any bonding agent known by a skilled artisan to bind or to adhere to the red blood cells without lysing them. See col. 6, lines 41-45, and 60-63. The bonding agents capture the red blood cells and hold them on the separation layer (30). See col. 6, lines 45-46. The remaining blood cells are removed by the membrane (40). See col. 6, lines 37-38. Thus, contrary to the Examiner's assertions that the fabric (30) in Carroll, et al. is surface treated to minimize the adsorption of plasma in order to lower the amount of sample needed for testing, the surface of the separation layer (30) in Carroll, et al. is treated to maximize the plasma which reaches the membrane (40), even though using a small sample size may also be an object in Carroll, et al. See col. 6, lines 47-49. Therefore, there is no motivation or teaching in Nomura and Carroll, et al. of a fibrous wicking material having a horizontal wicking rate of at least about 1.0 millimeter per second, the subject matter of claims 1, 6 and 11.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2124. Applicants respectfully traverse the rejection since the prior art fails to

disclose all the claim limitations of claims 1, 6, and 11, and there would be no motivation to combine the references as proposed by the Examiner.

Dependent claims 3, 4, 7-10, and 12-15, which are dependent from independent claims 1, 6, and 11, were also rejected under 35 U.S.C. §103(a) as being unpatentable over Nomura in view of Carroll, et al. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1, 6 and 11. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims for the cited references. Therefore, dependent claims 3, 4, 7-10, and 12-15, are also in condition for allowance.

Applicants respectfully request withdrawal of the rejection of claims 3, 4, and 6-15 under 35 U.S.C. § 103(a) as being unpatentable over Nomura in view of Carroll, et al.

III. Conclusion

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The new claims added do not contain any new matter. Applicants respectfully request favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' attorney of record, Hallie A. Finucane at (952) 253-4134.

Respectfully submitted,

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